

MARTA

**SUMMARY OF HIGHLIGHTS
RECOMMENDED TRANSPORTATION PROGRAM**

The attached papers provide brief statements and exhibits that summarize the findings and proposals from the past fourteen months of investigation of Atlanta's transportation needs. While technically sound, the papers are in draft form and are now presented only for the convenience of the Policy and Technical Coordinating Committee in its near-future work. This material, together with all prior work of the study project, is being developed into a complete Technical Report for the Committees.

*A Part of the Presentation to the
Policy and Technical Coordinating Committees
of the
Atlanta Area Transportation Study*

by



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FEATURES OF THE PROPOSED PROGRAM

1. A \$421 million transit program of rapid rail and busway construction is proposed to permit the Atlanta region to grow to its full potential and to provide the means for its people to enjoy the social and economic opportunities that Atlanta can provide. An additional \$54 million is tentatively estimated as required for transit vehicles, for a total program cost of \$475 million.
2. A major highway program is needed to complete the freeway system already underway for the inner region, and to set a framework of highways for the outer portion of the region. A \$508 million program of freeways is proposed.
3. In addition, a major expansion of past efforts for improving arterial and collector streets is needed for the freeway and transit programs to function effectively and to create a modern system of local street service. A \$1,058 million program is proposed to accomplish this by the early 1980's.
4. The transit program provides for that system which, among all major alternatives analyzed which provide Uptown express service, gives the most service per dollar of invested capital, the lowest cost per ride, scores well on other measures and may be built in stages if required. The small additional cost per ride to provide Uptown rail service is proposed as acceptable in view of other benefits that will result.
5. The transit system has 64 miles of private right-of-way routes, of which 10 miles are for rapid rail and 54 miles are for busways, and an expanded local and feeder bus network that includes operation on certain outer area freeways. This system will carry twice as many passengers as the present Atlanta Transit System service and it will carry them further, faster and in more comfort.
6. The proposed transit system will have a construction cost 17 percent less than MARTA'S 66-mile rail rapid transit proposal of 1968, yet will have about the same total mileage. The system will carry 10-15,000 more passengers per day than would have been carried by that system. There will be no significant change in annual transit system operating costs, between all-rail and the proposed system.
7. The proposed transit system will provide more service for most areas inside the Perimeter Highway than the all-rail proposal, and only in Marietta will direct express service be less, in any significant measure, than the all-rail proposal. Accessibility for inner city residents will be improved—many will be able to reach four or five times as many jobs by transit in 30 minutes of door-to-door travel as they could if local, surface transit were all that was available.

8. Properly encouraged and coordinated, real estate development near transit stations and busway access points will give a new structural framework to the region, around which many other beneficial policies and practices can be based. Well executed, the transit program can be a catalyst for a better region.
9. The busway elements of the plan can provide even greater benefits than have been estimated if a comprehensive research and development program is established immediately, in cooperation with industry and the Federal government. Research into vehicle design, automation in various components, propulsion systems and operating techniques all offer potential benefits.
10. The highway program is designed to provide a rational communication network for people who will use automobiles to do business, shop and carry out the many social activities of tomorrow's society. The system is not designed to eliminate congestion, for this is not viewed as a practical goal. In the 1980's, in peak periods, the proposed system will be much like today. However, in the off-peak periods—which represent nearly 90 percent of the hours in the year—there will be substantial benefits to travelers.
11. The proposed highway system will provide a substantial time saving for motorists compared with the initial highway system concept with which the study began a year ago. Principal new features are the central area tunnel to the northwest and the outer beltway north of but close to I-285. While specific data on savings cannot be quoted—the proposed system is a composite selected from two alternatives—the difference in the two tested alternatives was a 10 percent time saving over the initial system tested. Most elements of the second alternative are in the proposed system.
12. The cost of the proposed highway program is about the same as for the initial system that was studied. The system has 91 miles of new freeway and 54 miles of improvements to existing freeways and will result in a total freeway network of approximately 321 miles within the six-county area.
13. Most of the new freeway routes are “corridor” locations only, that is, they are approximate as to location and general design. The next step is to identify the best way to build the highway into the existing development, especially in a way to assist the community in gaining the facilities it needs at the same time the transportation facility is provided. A number of corridors also call for transit routes and stations to be designed jointly with the highway- community development effort.
14. The arterial and collector street system included in the highway recommendations is fundamentally that developed by the AATS staff following analysis of earlier forecasts of highway travel and review with area planning and traffic engineering staffs. This system represents a general plan indicating the approximate locations and scope of the arterial-collector system. It

will require further study and refinement as the final freeway and transit routes are determined and as future development occurs. The traffic operations study procedures advocated by the U.S. Department of Transportation (TOPICS) will be useful in this work. A development and improvement program of major proportions is required and it will require a major financial undertaking.

15. In the Central Business District of Atlanta the proposed program will mean 10,000 fewer parking spaces than if only a local, surface transit system were available. The benefit for peak hour motorists on CBD streets and on the CBD approaches to the freeway ramps will be enormous, for a large portion of those 10,000 parking spaces would have been used by peak hour motorists.

TRANSIT SYSTEM ALTERNATIVES

This section provides highlights and a selected list of comments on the findings resulting from a comprehensive search for the right transit system for the Atlanta region. Because there are no existing fixed facilities for transit service that can limit development of a new system and because of Atlanta's kind of land development and community patterns, there is a wide range of possibilities to be evaluated. At the same time, as will be seen below, the selection of the "best system," after all the evaluation work, is not a simple task.

The selection process depends upon rather clear-cut agreement as to Atlanta's transit objectives, and on this there is not a single opinion. The proposed transit system is believed to be the best for Atlanta yet there are options available that could make a good choice under certain conditions.

Atlanta, as any other city, must consider a number of factors in deciding what is best. To demonstrate this the ten most relevant system alternatives have been compared on an Evaluation Summary Chart. The Chart must be interpreted and used with great care because many significant bits of information are omitted on a single chart. In addition, the ranking system used for each factor can produce a distorted summary, or net, ranking figure. Nevertheless, the Chart is a useful tool for systematic appraisal of the many choices.

Major Findings

The alternative systems shown on the Chart have been developed from the testing of five basic systems known as A, B, C, D, and E. The results from these five tests have been previously reported and one system, A, consisting entirely of local, surface transit, has been rejected. From these five tests, however, a long list of possible refinements and new configurations were considered, and the ten most meaningful alternatives selected for comparison here.

The "best" plan—the one proposed for development—is Test System D-4. While not ranking as "best" on any individual item, its composite ranking does indicate its leading position.

If emphasis is placed on particular objectives, it would be reasonable to consider three other alternatives as acceptable—these three are D-3, E-2 and D-1. In summary, the following alternatives stand out above all the others:

Best

D-4, 10 miles of rapid rail and a large busway network.

Acceptable

- D-3, 27 miles of rapid rail and a large busway network.
- E-2, 6 miles of rapid rail and a large busway network.
- D-1, 15 miles of rapid rail plus a large busway network.

One major issue that was recognized early in the study work was whether to serve the developing "Uptown" area of Central Atlanta with grade-separated, express transit in view of the need for underground transit construction. The Evaluation Summary Chart shows the difference in capital cost per ride for the "best" system without Uptown express service and the "best" system with Uptown express service. Because Uptown service will cost only one cent per ride more than Non-Uptown service, 22 cents versus 21 cents, it is proposed that Uptown express service be provided. Among other benefits, the inducement to development here should more than offset the added capital cost. Among the "best" and "acceptable" plans listed above, only Test System D-1 does not provide Uptown service.

Evaluation Factors Review

1. Lowest Total Cost and Cost per Ride.

The lowest cost per ride system is provided by the small busway system Plan C, but this system does little for Atlanta's transportation problems. It would give much better service to the present transit riders, would attract a small number of auto users, and could be expanded to a larger system, but a policy of aiming now for this little a transit improvement would be ineffective and would likely have a negative impact on potential urban developments. If a least-cost per ride system is preferred over other community objectives, the one that should be first considered in Plan C-1. In this alternative, the Plan C busway routes are expanded by 11 miles and a 2-mile rail distributor is added from the Stadium to North Avenue but Uptown express service is not provided. It would provide a 44-mile system which could be expanded later although not into exactly the system that is recommended. An ultimately expanded system would have a higher capital cost in the long run, but there would be an offsetting saving because some costs would have been deferred for a number of years.

2. Traffic Impact.

The system that attracts the most riders and, therefore, makes the largest impact on traffic, is Plan E-2. The cost per ride is higher than for the recommended plan—10 percent higher on capital cost per ride, 3 percent higher on total annual cost per ride—but it is less costly per ride than the all-rail plan considered last year by MARTA. Its construction cannot be staged over time as readily as the other acceptable plans but if it were built as a single program, it would be a good system. Further, it is the only plan, among the major alternatives considered to be acceptable, that provides direct express service into the Model Cities-Stadium area.

3. Operational/Physical Feasibility.

For technical feasibility, Plan B, the all-rail plan, rates high because its general performance as an operating system is well established. In contrast, busway systems have not been built. Even though the assumptions involved in the Atlanta busway concepts require no technological breakthroughs, or complex or unproven mechanical equipment, prudence requires recognition of the lack of operating experience with this innovative system. The more miles of busway in the proposal, the more care is required not to over-extend initial busway construction commitments. Plan B is not ranked best on the Chart because its present design has capacity limitations that would be approached by the forecasted demand.

4. Staging Possibilities.

The best systems to develop from a staging and flexibility point are small busway plans. The least desirable is an all-rail plan principally because for any given amount of initial capital it buys the least amount of express service mileage. Except for the "Non-Uptown" systems, Plans E-1, D-4 (the proposed plan) and D-3 are best for staging because substantial mileage can be obtained in an initial stage, and the ultimate system can vary from present thinking if future information suggests it should.

5. Community Objectives.

The fundamental objectives of the individual communities and the region are believed best met by Plan E-2 with one exception: it has a higher cost and cannot be staged as readily as other alternatives. It will attract the most riders in nearly all parts of the region, it gives more accessibility to all of Atlanta's present Central Business District, it serves Atlanta's inner city residents as well as or better than other alternatives, and it serves the Uptown area with rail subway. Plan E-1 might appear second best for community objectives but potential congestion in the Transit Center station rules this out, if the central area is assumed to grow to its forecasted number of jobs in the 1980's. Plans D-3 and D-4 (the proposed plan) are next best.

6. Citizen/Transportation Advisors.

The attitudes of citizens, political leaders and transportation people are basic to a system decision. No ratings are given to the alternatives on the Evaluation Chart, but it is expected that each person will, in one way or another, make his own judgement and see how this affects the overall evaluation summary.

7. Summary.

The net ranking of each alternative helps to identify the better solutions, but the result should be considered only a gross approximation not to be followed too rigorously. From the findings shown on this Chart and all the tangible and intangible information gathered in the past year of study, it is proposed that Plan D-4 be selected as the best basis for meeting the transit needs of Atlanta.

8. Note on D-4 Refinement.

In evaluating the highway needs, it was concluded that the new northwest freeway in the South Cobb Drive corridor between I-285 and the proposed outer beltway near Marietta could be used by buses in the early 1980's. Therefore, Plan D-4 was shortened along its NW busway following the comparison of the systems evaluated on the Evaluation Summary Chart.

EVALUATION OF HIGHWAY ALTERNATIVES

The proposed highway system has been selected after analysis of two alternative systems. Prior highway analysis by the Atlanta Area Transportation Study has also been recognized in this process.

Four essential points have been identified in these studies. First, the traffic problems in and near the Atlanta Central Area will worsen substantially if the region grows in the way it is expected to grow. Second, more freeways will be needed inside the Perimeter Highway to achieve a reasonable degree of traffic service in off-peak periods and to keep peak hour traffic at tolerable levels of congestion. Third, there are only a small number of major alternatives to consider, in contrast to the very large number of transit possibilities available, because of the number of existing freeways. Fourth, careful design of added freeway sections to create a more rational network can produce substantial and meaningful time savings for motorists compared with lesser network designs.

The first of the two highway system concepts was analyzed in the first phase of the present study project. From that analysis, the second highway system alternative was developed for a new series of traffic tests, now completed. The second alternative included, by design, several extreme features to demonstrate how far certain new ideas could be carried. For example, no widening of the 4-lane sections of I-285 was provided in the traffic tests, but a 6-lane outer beltway relatively close to I-285 was included.

The objectives agreed to by the Policy Committee for designing the second highway alternative were:

1. provide a more logical spacing and network arrangement of routes
2. complement possible express transit service
3. encourage less growth in travel demand by altering the location of certain freeways.

The growth anticipated for the Atlanta Central Area will produce travel demands that must be met, in part, by development of a major transit program. Compared with most cities, Atlanta has already developed substantial freeway access for its Central Area and only limited additions can be considered. It is proposed that freeway service be added in areas west and northwest of the Central Area, partly to improve access into the business area but mainly to provide a means for keeping traffic not destined for the business area from the Central Business District streets. These added facilities based on traffic forecasts, will mean a three to five percent reduction in transit use in the 1980's. This is proposed to be an acceptable impact on transit in order to provide the accessibility benefits to highway users.

Other freeways are proposed inside I-285 because it is believed that they will be a better solution than forcing excess traffic over the arterial street system. While the freeways will

generate travel demands that would not exist otherwise, the arterial streets of the Atlanta region present a very poor circulation system, and even with a major improvement program would not serve regional travel as well as the development of several new freeways. Also, the studies indicate that inclusion of F-56 South and a new northwest freeway will reduce in a significant way the need for rebuilding of existing freeways—I-75 North and I-75 South—although some improvements are proposed. These new facilities will not have a major impact on transit use. It is to be noted, however, that this evaluation has not had the benefit of preliminary route engineering nor of community development studies and it is imperative that such studies be made as soon as possible to be certain that the proposed network inside I-285 can be achieved.

In the area of I-285 and beyond, the highway plan will have a major impact on the structure, the pattern and intensity of land development. The initial highway studies indicated much more travel would be generated here than previously had been expected, and this led to seeking a highway network that would re-orient future travel patterns. The second phase of highway studies showed that some success could be achieved by locating a new outer beltway (or outer Perimeter Highway) close to the present Perimeter Highway. The impact on travel accessibility from the two nearly-parallel high-speed circumferential roads did shift travel patterns. By 1983, or more accurately, perhaps, the year in which 2 million persons will live in the six-county area, the new road will be needed between Marietta and Stone Mountain. Thereafter, this new route should be extended around the region on a schedule that can be determined later, especially after an updated regional development plan is adopted that recognizes the impact and the opportunities from this freeway. The proposed system indicates the sections that will most likely be required next by proposing establishment of the rights-of-way before 1983 in the northwest, southwest and east areas.

Similarly, the proposal calls for right-of-way acquisition before 1983 for F-56 South between I-285 and I-75 South. This road will be needed ultimately, and the means of financing—for example, through a system of urban toll roads—could justify its earlier construction. The best location between the Lakewood Freeway Extension and I-75 South would pass close to Forest Park and offer this area of Clayton County more traffic service than the previously discussed location. However, it is recognized that more ideal location will be more difficult to achieve.

The new northwest freeway should be located as close to South Cobb Drive as conditions permit to bring it within the area of influence of the Smyrna-Marietta urban corridor.

PROGRAM FOR ACTION

The next step forward in Atlanta's transportation work is for the Policy and Technical Coordinating Committees to review and act on the proposals presented here. Adoption of a transportation plan by the Policy Committee is the fundamental, immediate objective. This general plan will be recommended to the individual area governments and the major agencies involved for their approvals. It will then become a meaningful policy statement for undertaking the program.

Establishment of an orderly and effective program will require entering into an implementation phase of activity. Essentially, it will be a phase of further project definition, coordination, financial planning, scheduling and control to assure that the program as ultimately implemented attains the objectives of the adopted general plan. The work will include those engineering, operations planning and community planning steps which Federal programs specify and which good financial and planning judgement would require, including the participation of the new citizen advisory group. These particular steps will occupy the large part of Atlanta's transportation planning energies for the next year. Certain steps will continue into the 1970's, in coordination with an organized process that will provide periodic review and refinement of the adopted general plan. There will be need for a continuous planning procedure.

The highway program will need to establish a schedule of early project actions, make preliminary engineering and joint community-transit-highway development studies and determine the means of financing the new freeway and arterial projects. A large-scale traffic operations planning task will be useful in developing the arterial road network. The Highway Department may wish to determine if it can and should participate in financing transit projects which contribute to reducing highway demands, in accordance with evolving Federal policy which permits use of highway funds under prescribed conditions.

Transit will need the same kinds of implementation steps as highways, and other kinds as well. Major areas needing attention are advanced operations planning for busways, the restructuring of local bus services, new approaches to vehicle design, and marketing efforts to build a more positive attitude toward use of the new system. Inclusion of busways in the program provides an opportunity, and establishes an obligation, to apply innovative thinking in general as well as in the development of several specific components of the system. Atlanta will find the Federal government anxious to cooperate in financing vehicle design and system control research, passenger service demonstrations and experiments, and construction of test facilities in order to advance its own commitment to find improved urban transportation systems.

There will be need for city and regional planning steps to exploit the transportation plans. Zoning and land use near transit stations can be altered where economic and environmental impact studies support it. Development incentives can be considered as one means of accomplishing coordinated, joint projects.

There are a number of locations in the region where development will be different from that in the official development plans and transportation forecast data—Sandy Springs, East Lake, parts of Atlanta's central business district, etc.—and this will need to be reflected in the advanced transportation planning work. The latest regional development plan work, now underway for a 1988 plan, will need to be adjusted to reflect the transportation policies. After its adoption, it, in turn, will be fed back into future refinements of the transportation plan and program, as a part of the continuing planning process.

A means for financing the transit, freeway, and arterial program will be needed and this could require new legislation. Toll highways and bridges, central area parking fees, bond issues and other means warrant investigation. Limiting the use of automobiles in the central area in peak periods may become a required step in the 1970's. All such programs should be consistent with the adopted general plan and be reviewed by the Policy Committee.

The U.S. Department of Transportation has initiated a nation-wide, 15-month project that seeks major improvements in the implementation process. It will be concerned, for example, with institutional arrangements and citizen involvement. While oriented toward central city transportation problems, it will be meaningful to Atlanta's overall regional task. Atlanta has been selected as one of the cities to be included in the study project, and the Policy Committee will want to work closely with the project to be certain that it contributes timely assistance to the implementation work of the Committee.

Substantial progress on the above tasks will be needed before the major elements of the highway and transit programs can be brought into the final construction design and land acquisition stage. It is clear that there are strong arguments for early action to implement these steps so that Atlanta's transportation program can move forward with speed and confidence.